

Toward a web of Social Networks ?

Mickaël Rémond - ProcessOne
Erlang Factory - March 2011

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Dispersed social networks with XMP and eJabber
A collaborative initiative around OneSocialWeb

The social network problem

Personalization + Lack of interoperability = Walled garden Privacy issues



Walled garden

Privacy issues

Web "curated" experience

Federation

Aggregation

Solutions ?

Federation

Aggregation

Federation



the negative and positive behavioral and emotional results

Web "curated" experience



Aggregation



Make social communications as simple and universal as email

Providing the following services to users:

- Own identity and yet multiple communication
- Data portability

A lot of flexibility but no platform yet

A protocol based on open standards

- XMPP: Identity, discovery and communication
- JSON: Representing data model for mobile devices
- Urdot: Data model for profiles
- SNN: Data model for relationships

A lot of activity but no platform yet



A protocol based on open standards

- **SHIR**: Identity, documentary and communication
- **Activenessense**: Data model for social objects
- **UCard**: Data model for profiles
- **SPN**: Data model for relationships

[illegible]

Why XMPP for OneSocialWeb?

- **Chaperone** (protein) - binds to proteins and helps them fold properly
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Existing clients



Challenge: *Federate with existing initiatives*

[illegible]

Demonstrated compliance

- **split-and-merge** implementation:
 - **merge** with **identifiers**
- split-and-merge** implementation:
- **padding = Tucker**

The future

- Processes should be improved to make it more XMPP friendly
- Impact on XMPP and open standards
- Impact on storage
- Participation in IETF for building a standard
- Cleanup and release implementation
- More of focus for more variables

Stay tuned on <http://xmpp.org/wiki/Workshop>

- Protocol should be improved to make it more XMPP friendly
- Impact on XMPP and related protocols
- Impact on the app
- Participation to IETF for building a standard
- Cleanup and release implementations
- More clients for more devices

Stay tuned on
<http://www.cnn.com/health>

People

Community

Society

Journal of
Public Health
Management and Practice
Volume 15 Number 1
February 2009
Pages 1-100
ISSN 1075-2975
DOI: 10.1177/1075297508318111
Copyright © 2009 Sage Publications
10.1177/1075297508318111
jphm.sagepub.com

[illegible]

Work in progress

- Platform working with federated cloud
- No pending in other platforms yet
- Improvements and optimization in publish service
- Will be open access in the standard cloud sections to spread it

Erlang tools

- replaced as of the new API
- replaced `xx`, pointing to replace `d`
- Websocket on the HTTP protocol
- examples: [Facebook](#) and [Twitter](#)
- in a browser, `WebSocket`

High-level architecture



Demo

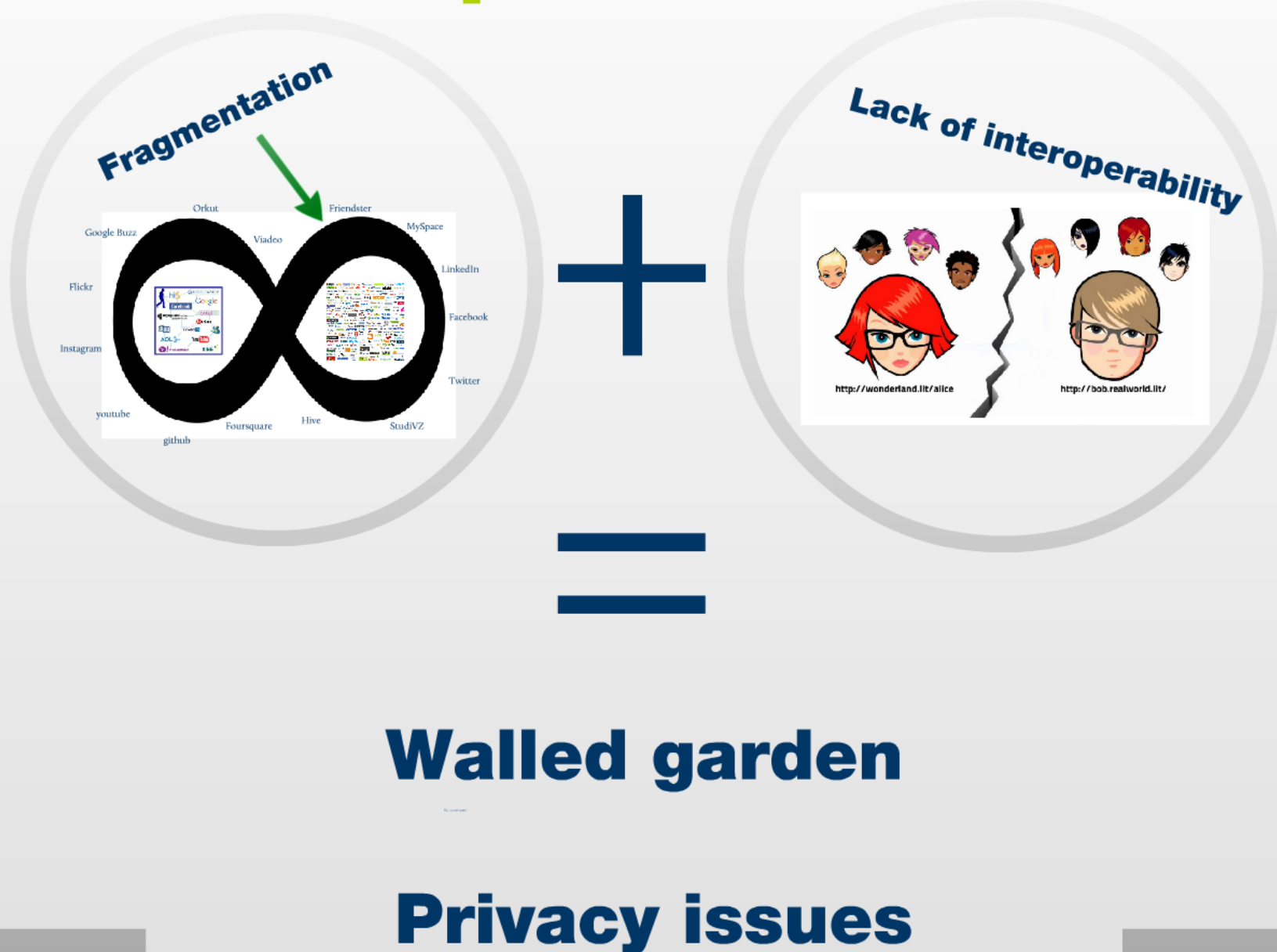
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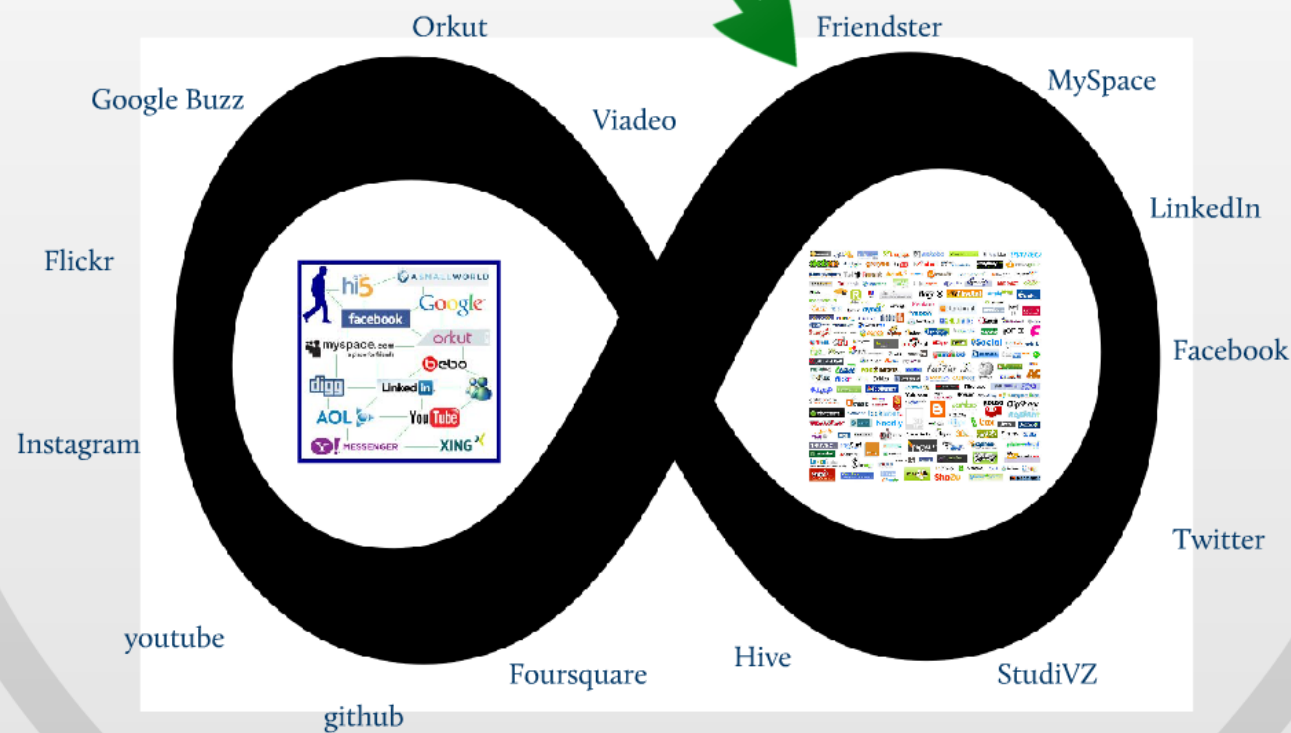
Distributed social networks with XMPP and ejabberd

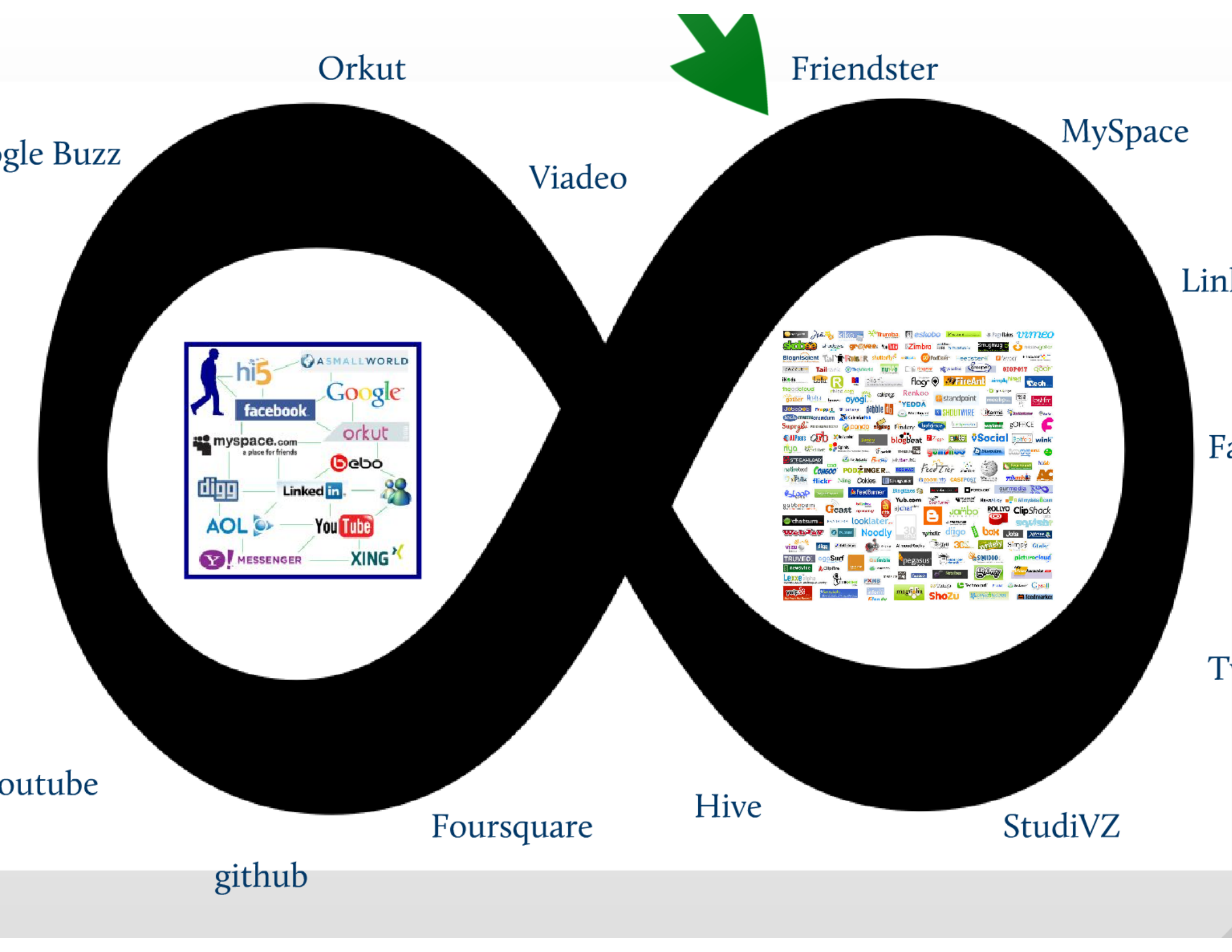
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The social network problem



Fragmentation

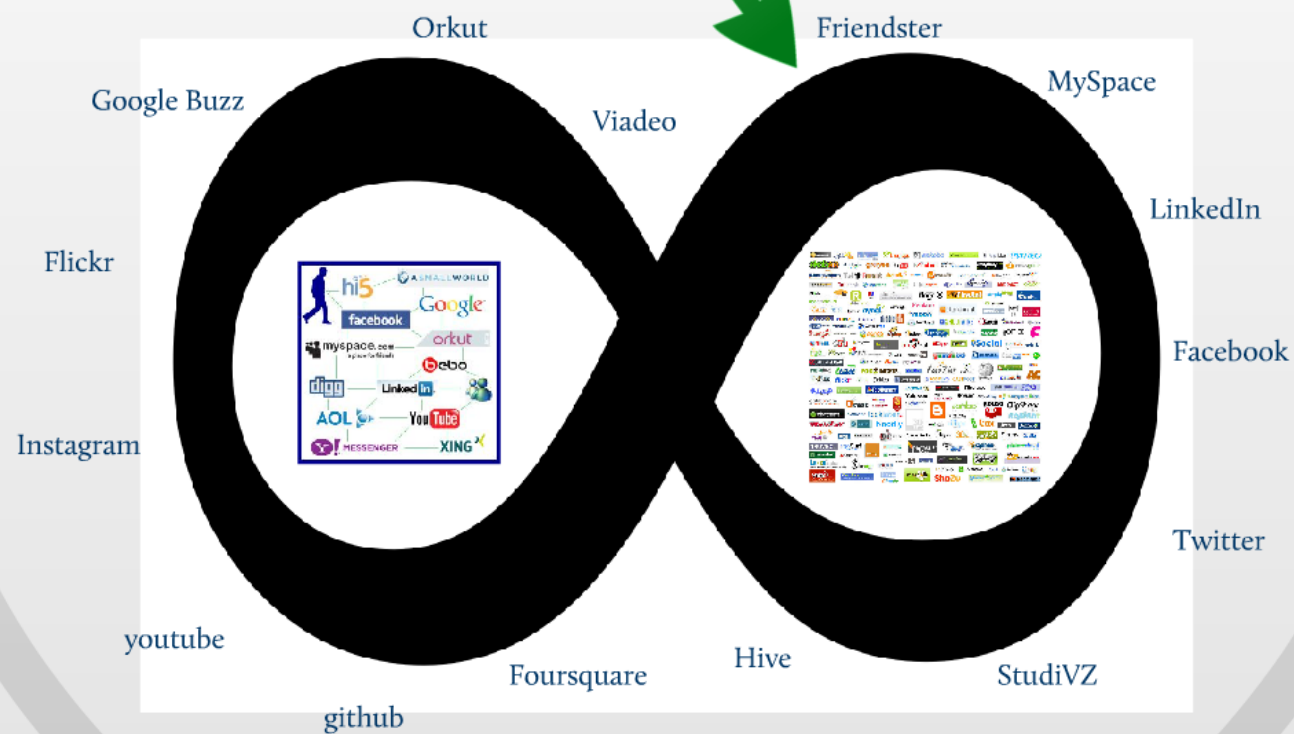




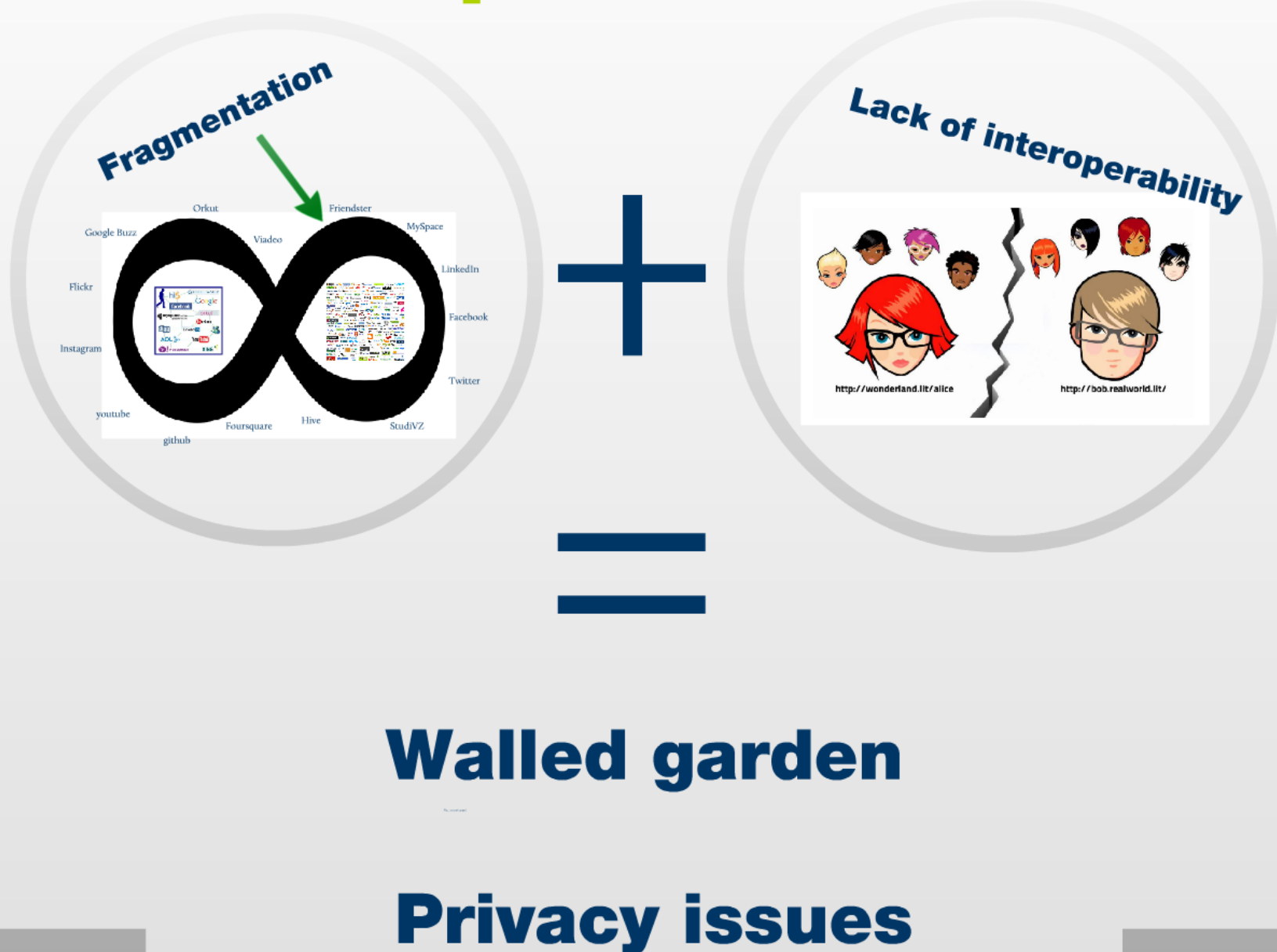




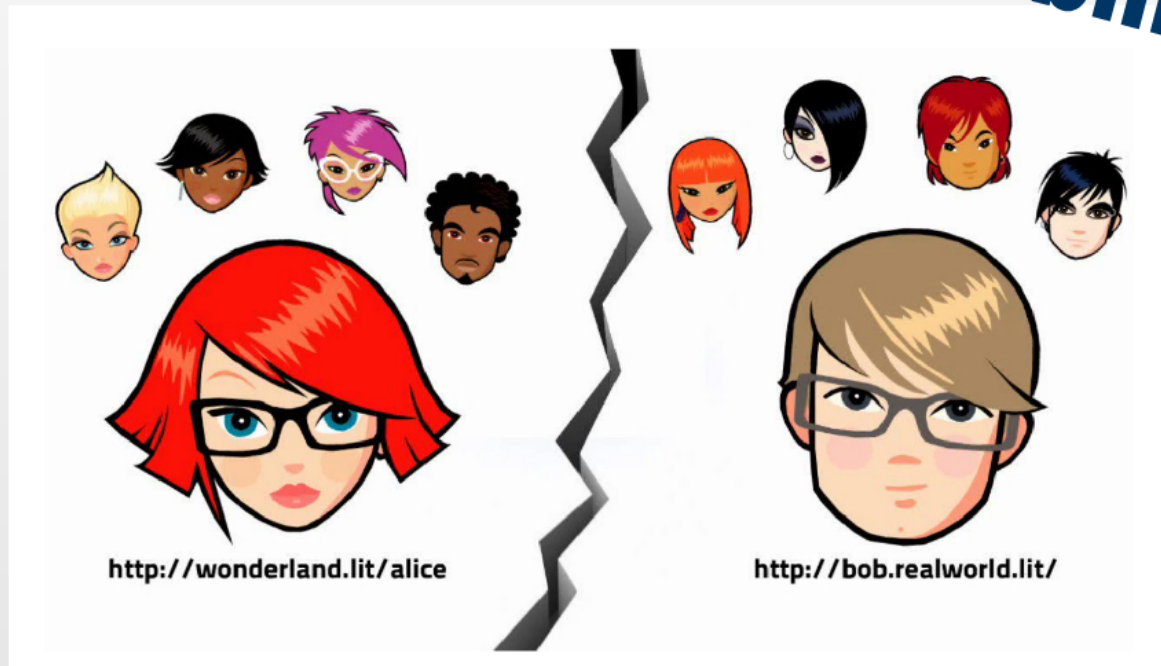
Fragmentation



The social network problem



Lack of interoperability





Walled garden

Yes, you are trapped!

Privacy issues

Yes, you are good!

Yes, you are trapped!

Walled garden

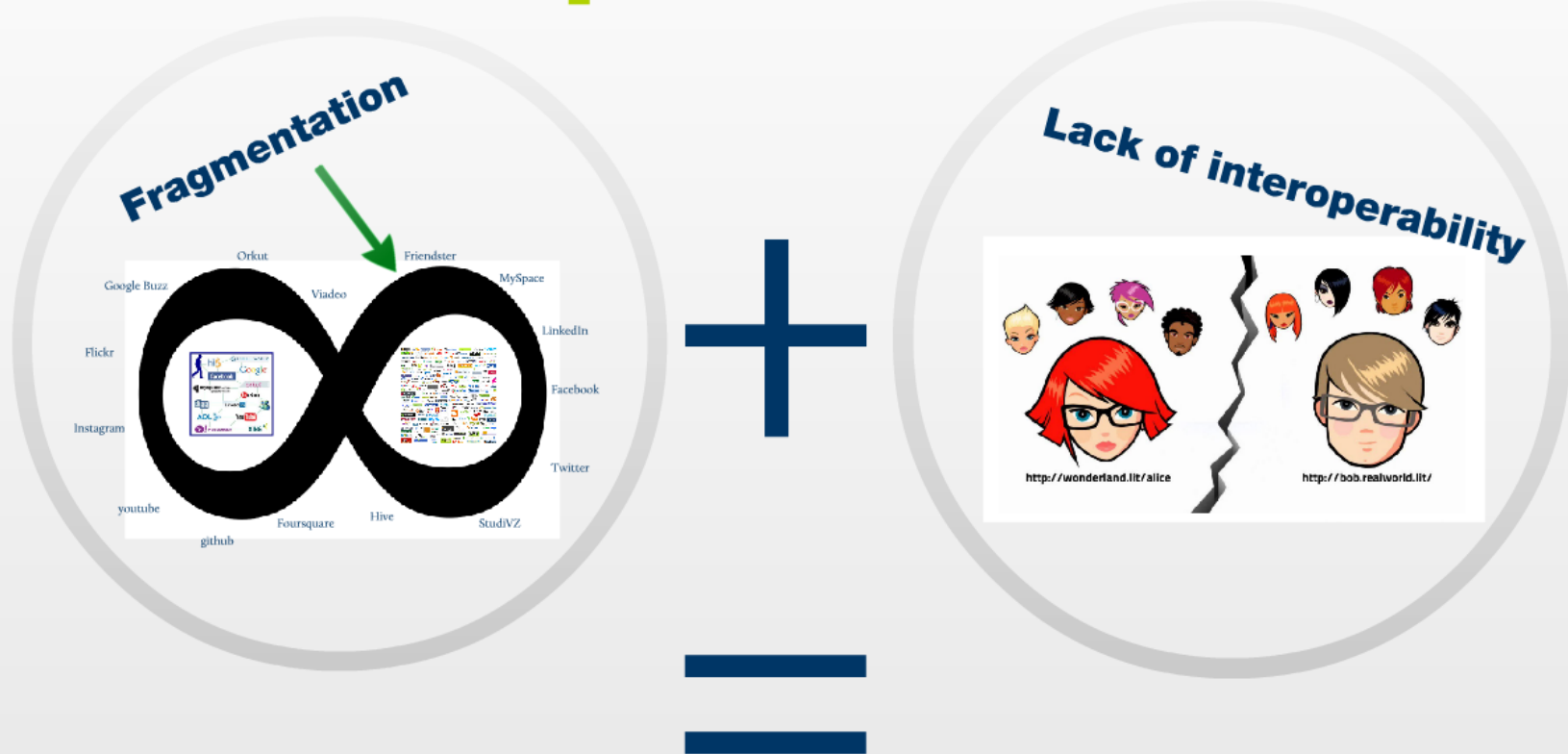
You, you are trapped!

Privacy issues

You, you are angry!

Yes, you are spayed!

The social network problem



Walled garden

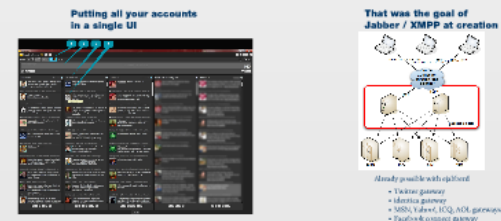
Privacy issues

Web "curated" experience



Solutions ?

Aggregation



Problem: this is a dead end

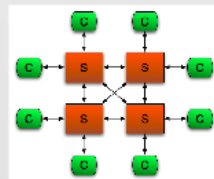
You still need an account on all social networks

If no or limited API, you need reverse engineering

This is unofficial and can be banned

Federation

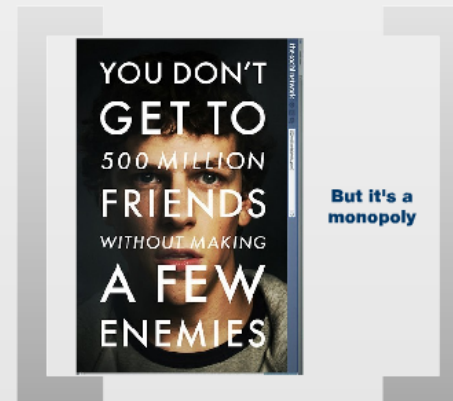
That's also what XMPP is about
Based on domains and server-to-server (s2s)



Web "curated" experience



... across the whole web



Facebook integrated Web

It's dead simple

A single user experience...



A single user experience...

News Feed

Top news · Most recent

Share:  Status  Photo  Link  Video

What's on your mind?



Fabrice Auclert via **Pierre Delavaquerie**

Cécile Duflot nous apprend que le Japon est dans l'hémisphère sud.
www.youtube.com

<http://www.contrepoints.org/2011/03/15/17056-ecologie-pour-ne-surtout-pas-en-...> Cécile Duflot qui sait ce dont elle parle nous apprend que le Japon est dans l'hémisphère sud. Et les Maldives ? Quel hémisphère ?

 Yesterday at 12:47 · Like · Comment · Share

... across the whole web

... across the whole web



Connect



Share



12,303 people like this. Be the first of your friends.

Identify your friends taste



TechCrunch sur Facebook



174,586 personnes aiment TechCrunch.



Alain



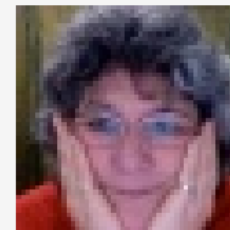
Yariv



Arnaud



Parul



Mary



Raakesh



Amy



Michel



Eugene



Mike



Module social Facebook

Discuss

Leave Comments



Add a comment...

☒ Post to Facebook

Posting as Mickaël Rémond ([change](#))

[Comment](#)

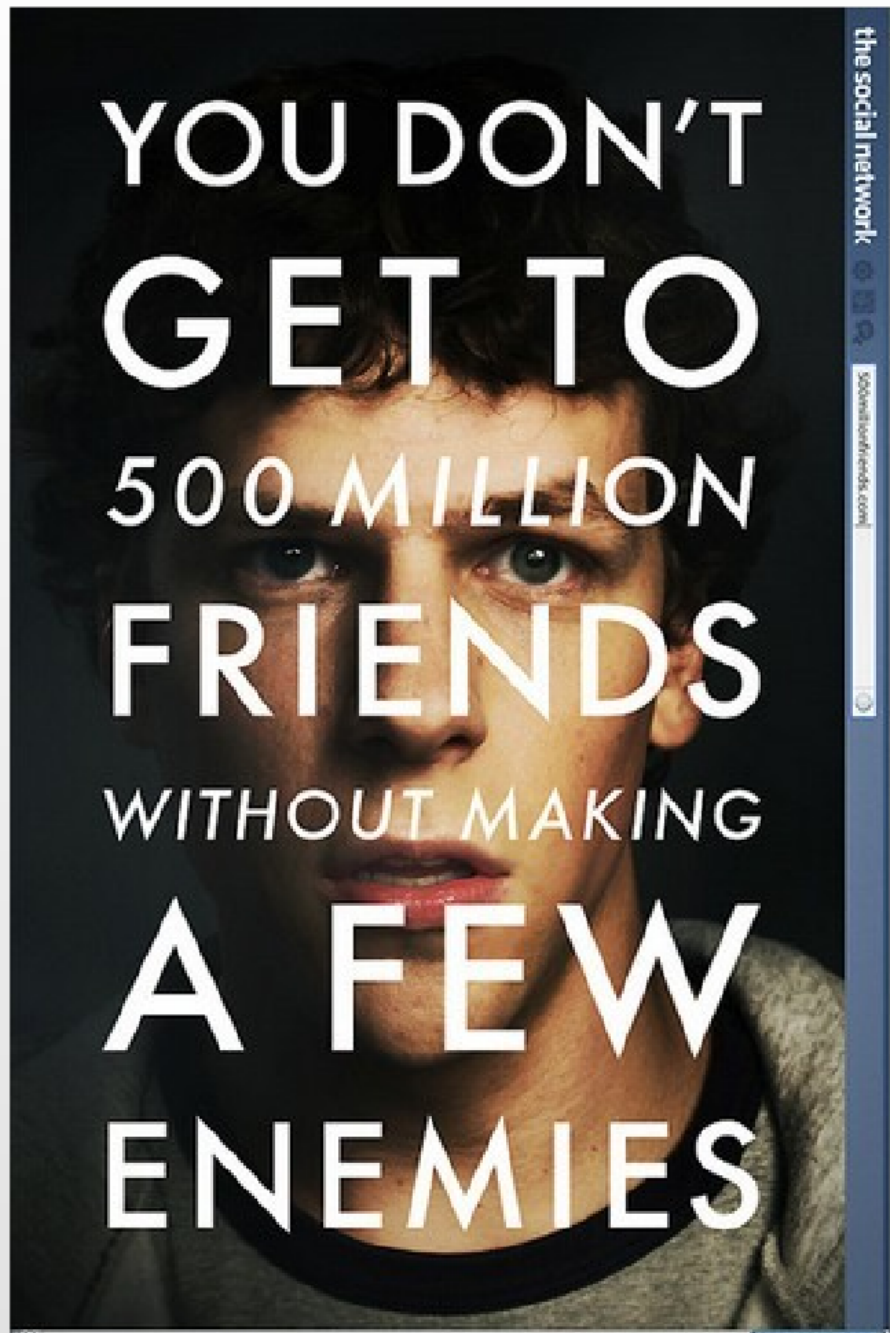


Yanyi Luo · Columbia

I have been following Broadcastr for a while now and this article points out an important aspect of it -- that Broadcastr is, at its core, a new form of narrative, of fiction. Generally speaking, as much praise its gotten for its capabilities, it also falls under the danger of being swallowed by its own multifaceted uses.

I also agree with Evans in his hope that Broadcastr will take advantage of its geotagging feature to leave the narrative at the place. Sound is increasingly taken for granted; the idea of its portability is a relatively new train of thought brought about by technology. Sound is in every way a place of its own, but to know the full effect is also to experience the chambers and environments that harbor it.

[Like](#) · [Reply](#) · 11 y a 31 minutes

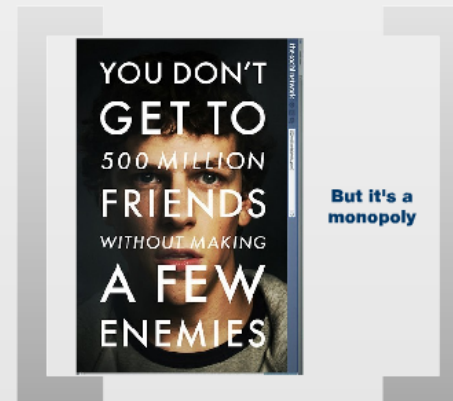


**But it's a
monopoly**

Web "curated" experience



... across the whole web



Web "curated" experience



Solutions ?

Aggregation

Putting all your accounts in a single UI



That was the goal of Jabber / XMPP at creation

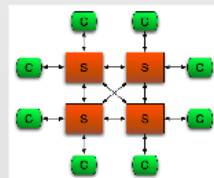


Already possible with existing:

- Twitter gateway
- iMessage gateway
- 100% instant IM gateway
- Facebook account gateway

Federation

That's also what XMPP is about
Based on domains and server-to-server (s2s)



Problem: this is a dead end

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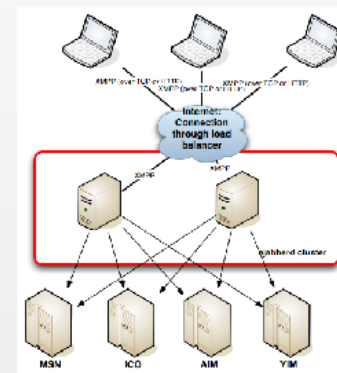
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Aggregation

Putting all your accounts
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Already possible with ejabberd

- Twitter gateway
- identica gateway
- MSN, Yahoo!, ICQ, AOL gateways
- Facebook connect gateway

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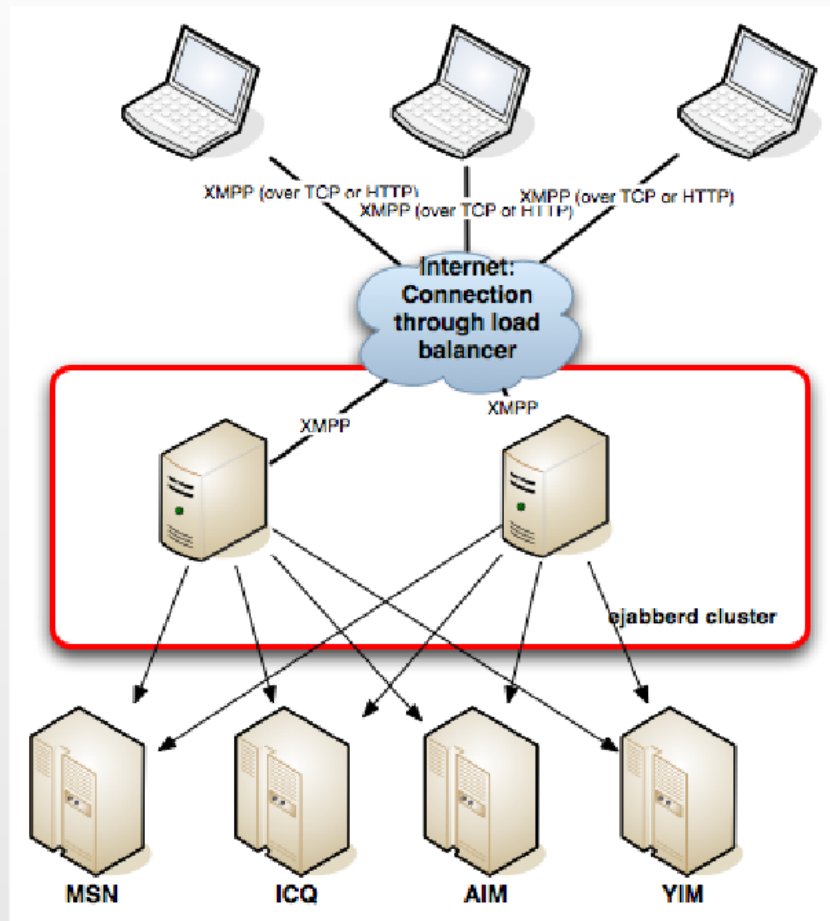
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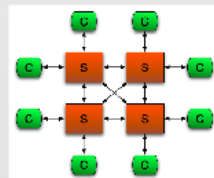


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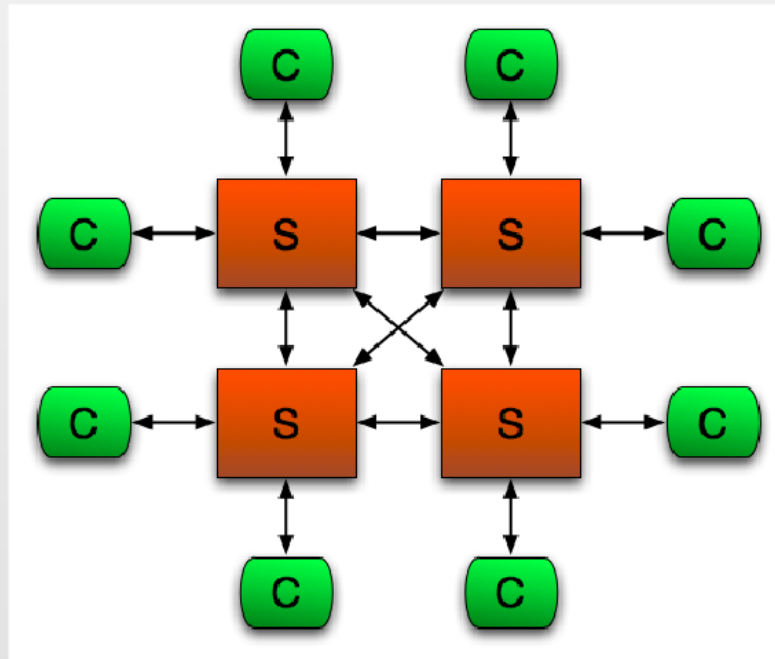
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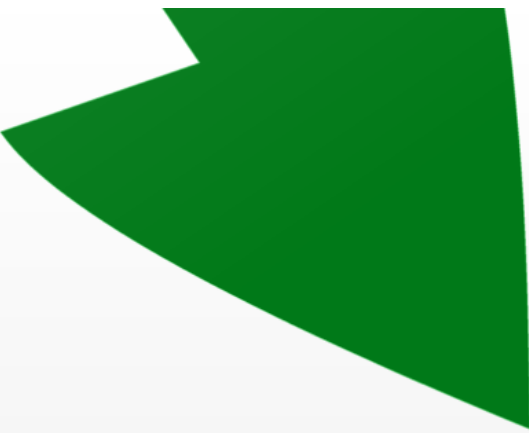
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We need the tools to make
federated social networks a reality



Projects

- 6d
- Ampify
- CouchAppSpora
- Diaspora
- GNU Social
- Mr. Privacy
- OneSocialWeb
- Project Danube
- Socialriver
- StatusNet (ostatus)
- ... Many others

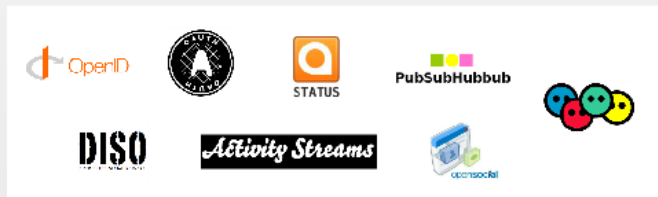
OneSocialWeb

Reusing content from Diana Chen presentation at Sea Beyond 2011

Make social communications as simple and universal as email

- Friending and following across networks
- One identity and yet multiple communities
- Data portability

A lot of activity but no platform yet



A protocol based on open standards

- XMPP: Identity, discovery and communication
- Activitystreams: Data model for social objects
- VCARD: Data model for profiles
- XFN: Data model for relationships

Why XMPP for OneSocialWeb ?

One technology to achieve such federation seamlessly

- Identity (user@domain)
- Security (persistent connection, SSL, TLS, dialback)
- Discovery for feature and services (XMPP disco, Caps)
- Useful extensions (Roster, privacy, pubsub)

Doing the same in web world requires to assemble

- OpenID (identity)
- Oauth (authentication and authorization)
- Webfinger (discovery and openID on email address)
- Pubsubhubbub (server to server federation)
- Salmon (messaging and commenting)
- ... and to address lot of other issues (like privacy)

Challenge: Federate with existing initiatives

Reuse of Activitystreams data format

provides a common language to describe social interactions...

- actor verb object target
- mickael posted a note
- mickael posted a picture to an album
- mickael liked a video

... building upon existing Atom elements: title + link + summary + author + id + updated + verb + object-type + target

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<?xml version="1.0" encoding="utf-8"?>
<feed xmlns="http://www.w3.org/2005/Atom"
      xmlns:activity="http://activitystreams.org/spec/1.0/">
  <entry>
    <title>...</title>
    <link rel="alternate">...</link>
    <id>...</id>
    <updated>...</updated>
    <author>
      <activity:object-type>person</activity:object-type>
      <name>...</name>
    </author>
    <activity:verb>post</activity:verb>
    <activity:object>
      <activity:object-type>note</activity:object-type>
      <content type="html">...</content>
      <activity:html">...</activity:html">
    </activity:object>
  </entry>
</feed>
```

Existing clients



More on the work

Demonstrated compliance

OnesocialWeb reference implementation with:

- ejabberd implementation
- ostatus with identica

ejabberd implementation:

- posting to Twitter

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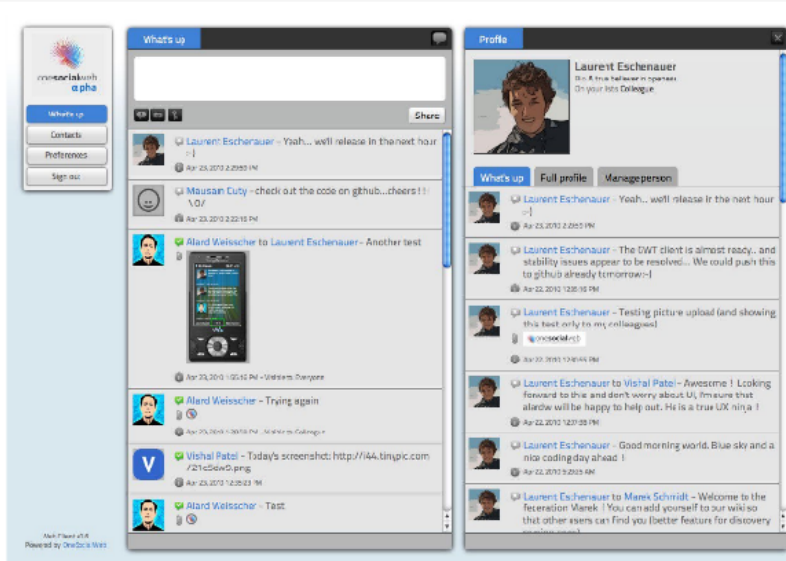
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    <updated>...</updated>
    <author>
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      <name>...</name>
    </author>
    <activity:verb>post</activity:verb>
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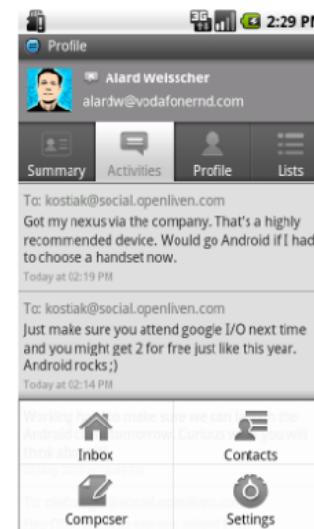
Existing clients

Web client

Android client



web client (HTML + JS)



Android client

More on the work

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ejabberd implementation:

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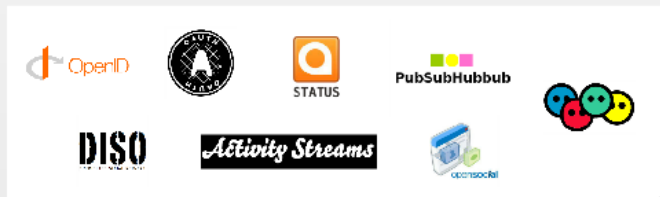
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More on the work

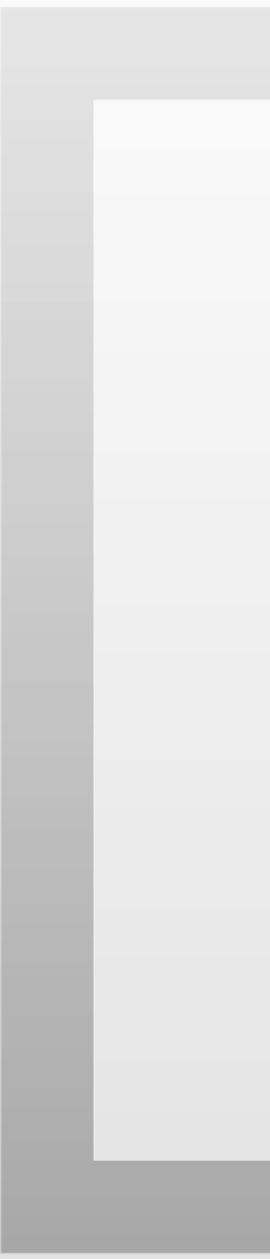
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People

Vodafone

Diana Cheng
Daniel Appelquist
Laurent Eschenauer
Alard Weisscher

ProcessOne

Mickael Rémond
Christophe Romain
Karim Gemayel

Community

Luca Faggioli
Many others



ejabberd modules

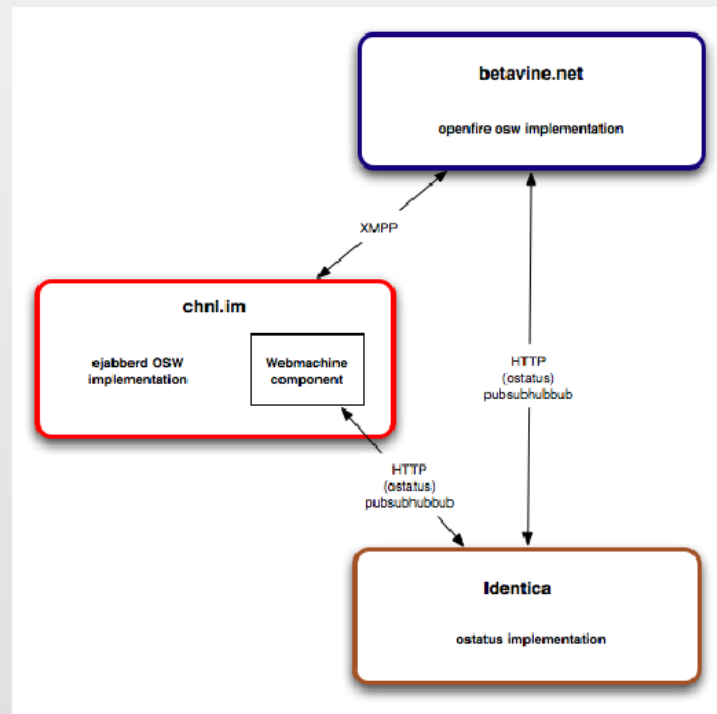
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- No posting to other platform yet
- Improvements and optimisation to pubsub service
- Will be open source in the standard ejabberd version to spread it

Erlang tools

- ejabberd and its nice API
ejabberd 2.x, porting to ejabberd 3.x
- Webmachine for HTTP protocol compliance (Pubsubhubbub)
- mochiweb, lhttpc

High-level architecture





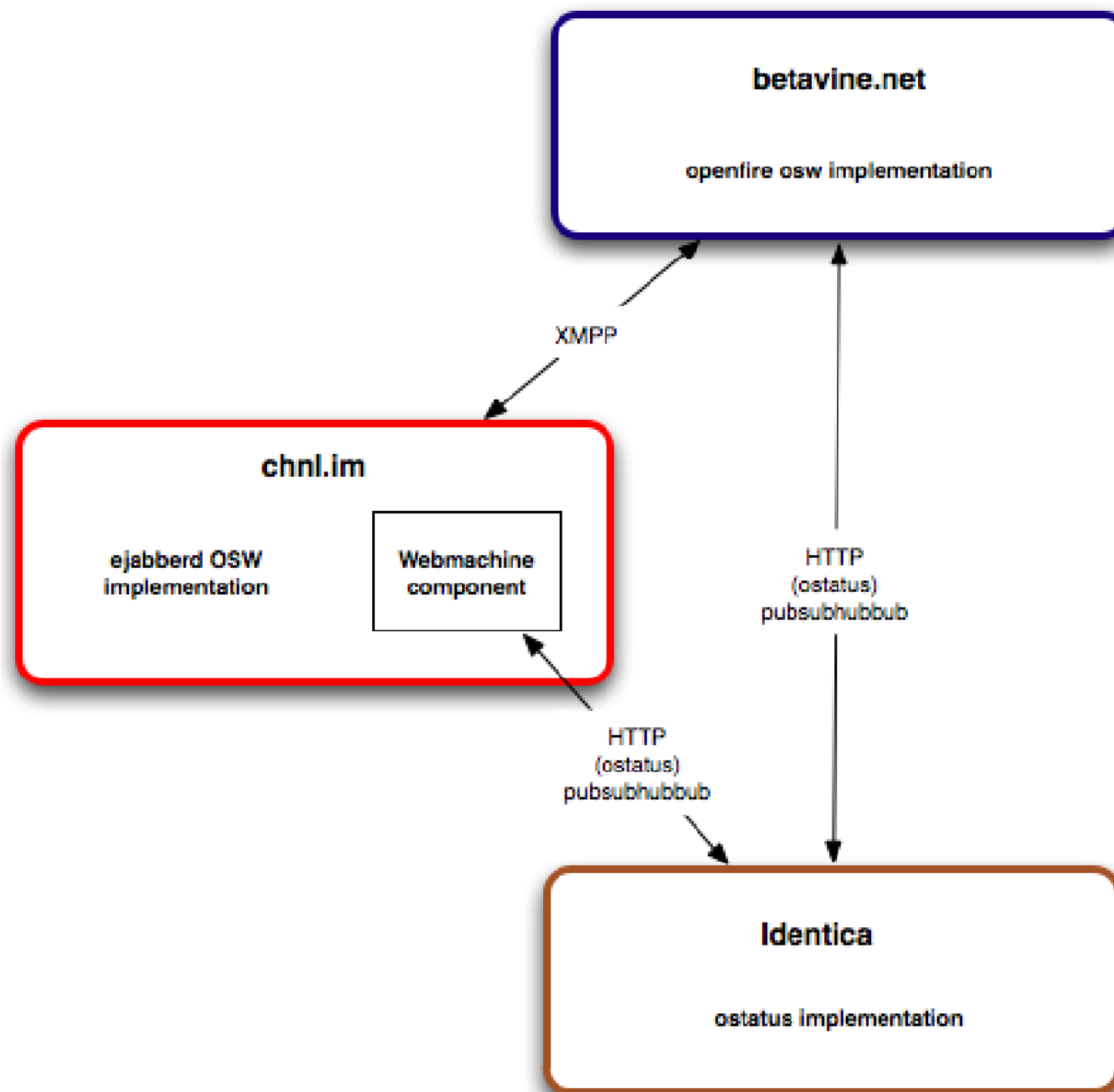
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ejabberd modules

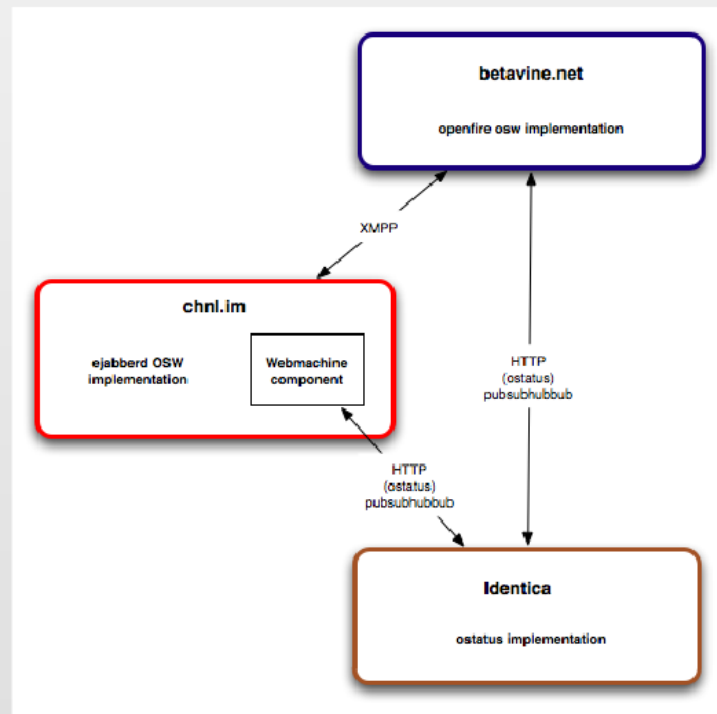
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High-level architecture



The future

- Protocol should be improved to make it more XMPP friendly
- impact on XMPP and ejabberd pubsub
- Impact on storage
- Participation to IETF for building a standard
- Clean-up and release implementation
- More clients for more mobiles

Stay tuned on
<http://www.onesocialweb.org>

Demo

Toward a web of Social Networks ?

Mickaël Rémond - ProcessOne
Erlang Factory - March 2011

Distributed social networks with XMPP and ejabberd
A different future, around OneSocialWeb

The social network problem



Walled garden
Privacy issues

Solutions ?



It's possible to build a public
federated social network easily

Projects

- 6d
- Amplify
- CouchAppSpora
- Diaspora
- GNU Social
- Mr. Privacy
- OneSocialWeb
- Project Dambé
- Socialriver
- StatusNet (ostatus)
- ... Many others

Web "curated" experience



Aggregation



Make social communications as
simple and universal as email

Friendship and following across screens for
their identity and just real time conversations
Responsibility

A lot of activity but no platform yet



A protocol based on open standards

- XMPP: Identity, discovery and conversations
- ActivityStreams: Data model for social media
- XFN: Data model for relationships

OneSocialWeb

Why XMPP for OneSocialWeb ?

OneSocialWeb is built with XMPP because:

- It's a standard protocol
- It's a real time protocol
- It's a decentralized protocol
- It's a protocol that can be used for many other things
- It's a protocol that can be used for many other things

Challenges: Federate with existing initiatives

OneSocialWeb is a federated social network. It means that it can talk to other federated social networks. This is a challenge because each federated social network has its own protocol and its own data model. OneSocialWeb is trying to find a way to talk to all of them.



Demonstrated compliance

OneSocialWeb is compliant with the following standards:

- XMPP: Identity, discovery and conversations
- ActivityStreams: Data model for social media
- XFN: Data model for relationships

The future

- Protocol should be improved to make it more XMPP friendly
- Improve XMPP and ActivityStreams
- Improve the way it's built
- Clean up and release implementation
- More clients for more devices

Key resources:
<http://www.onesocialweb.org>

Demo

People



ejabberd modules

Work in progress:

- Modules for federated identity (fedi)
- No pending in other platform yet
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Existing tools:

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